



Texas Commission on  
Environmental Quality  
Austin, Texas

PERMIT FOR INDUSTRIAL SOLID  
WASTE MANAGEMENT SITE issued  
under provisions of TEXAS HEALTH  
AND SAFETY CODE ANN.  
Chapter 361 (Vernon)

HAZARDOUS WASTE PERMIT NO. 50390  
ISWR NO. 30897  
EPA ID. NO. TXD048901235

TXD048901235  
Permits  
RECEIVED  
04 DEC 14 PM 12:53  
RCRA PERMITS PROGRAM

Name of Permittee: Chesley Industries, Inc., (a subsidiary of Hussmann Corporation)  
1709 Highway 36 North  
Brenham, Texas 77833

Site Owner: Recycled Products  
4339 Walnut Lane  
Dallas, Texas 75229

Registered Agent for Service: CT Corporation System  
350 N. Saint Paul Street  
Dallas, Texas 75201

Classification of Site: Hazardous Waste Post-closure Care, On-site

The permittee is authorized to conduct post-closure care in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules of the Commission and other Orders of the Commission, and laws of the State of Texas. This permit does not exempt the permittee from compliance with the Texas Clean Air Act. This permit will be valid until canceled, amended, modified or revoked by the Commission, except that the authorization to conduct post-closure care of wastes shall expire midnight, 10 years after the date of permit approval.

All provisions in this permit stem from State and/or Federal authority. Those provisions marked with an asterisk (\*) stem from Federal authority and will implement the applicable requirements of HSWA for which the Texas Commission on Environmental Quality has not been authorized. Those provisions marked with a double asterisk (\*\*) stem from federal authority only.

ISSUED:

DEC 02 2004

For The Commission

Chesley Industries, Inc., (a subsidiary of Hussmann Corporation)

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**I. FACILITY DESCRIPTION****A. Size and Location of Site**

A permit is issued to Chesley Industries, Inc., (a subsidiary of Hussmann Corporation) (hereafter called the permittee), to conduct post-closure care at a surface impoundment closed as a hazardous waste landfill associated with the former Old Brazos Forge facility located at 1709 Highway 36 North in Brenham, Washington County, Texas, drainage area of Segment 1202 in the Brazos River Basin (North Latitude 30°10'59", West Longitude 96°25'8"). The legal description of the facility submitted in permit No. 50390 application dated January 16, 2003 is hereby made a part of this permit as "Attachment A". The hazardous waste management facility as delineated by the permittee's application map is hereby made a part of this permit as "Attachment B".

**B. Incorporated Application Materials**

This permit is based on, and the permittee shall follow the Part A and Part B Industrial and Hazardous Waste Application submittal dated January 16, 2003 and revised by submittals dated December 10, 2003, December 11, 2003, January 8, 2004, April 8, 2004, and May 18, 2004, the Application Elements listed in "Attachment C", which are hereby approved subject to the terms of this permit and any other orders of the Texas Commission on Environmental Quality (TCEQ).

**II. GENERAL FACILITY STANDARDS****A. Standard Permit Conditions**

The permittee has a duty to comply with the Standard Permit Conditions under 30 Texas Administrative Code (TAC) Section 305.125. Moreover, the permittee has a duty to comply with the following permit conditions:

**1. Modification of Permitted Facilities**

The facility units and operational methods authorized are limited to those described herein and by the application submittals identified in Provision I.B. (Incorporated Application Materials). All facility units and operational methods are subject to the terms and conditions of this permit and TCEQ rules. Prior to constructing or operating any facility units in a manner which differs from either the related plans and specifications contained in the permit application or the limitations, terms or conditions of this permit, the permittee must comply with the TCEQ permit amendment/modification rules as provided in 30 TAC Sections 305.62 and 305.69.

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[II.A.]

2. Duty to Comply

[30 TAC Section 305.142] The permittee must comply with all the conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency order issued by the Commission. Any permit noncompliance, other than noncompliance authorized by an emergency order, constitutes a violation of Resource Conservation and Recovery Act (RCRA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

4. Definitions

For purposes of this permit, terms used herein shall have the same meaning as those in 30 TAC Chapters 305, 335, and 350 unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

Application data - data used to complete the final application and any supplemental information.

5. Permit Expiration

In order to continue a permitted activity after the expiration date of the permit the permittee shall submit a new permit application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Executive Director. Authorization to continue such activity will terminate upon the effective denial of said application.

6. Certification Requirements

[30 TAC Section 305.144] For a new facility, the permittee may not commence storage, processing, or disposal of solid waste; and for a facility being modified, the permittee may not process, store or dispose of solid waste in the modified portion of the facility, except as provided in 30 TAC Section 305.69 (relating to Solid Waste Permit Modification at the Request of the Permittee) until the following has been accomplished:

## [II.A.6.]

- a. The permittee has submitted to the Executive Director and the local Regional Office of the TCEQ, by certified mail or hand delivery, a letter signed by the permittee, and signed and sealed by a Texas Licensed Professional Engineer stating that the facility has been constructed or modified in compliance with the permit. If the certification is being provided to document proper closure of a permitted unit, or to certify installation or repair of a tank system, then the certification must be signed and sealed by an independent Texas Licensed Professional Engineer. Required certification shall be in the following form:

"This is to certify that the following activity (Specify activity, e.g., construction, installation, closure, etc., of an item) relating to the following item (Specify the item, e.g., the particular facility, facility unit, unit component, subcomponent part, or ancillary component), authorized or required by TCEQ Permit No. 50390, has been completed, and that construction of said facility component has been performed in accordance with and in compliance with good engineering practices and the design and construction specifications of Permit No. 50390."

- b. A certification report has been submitted, with the certification described in Provision II.A.6., which is logically organized and describes in detail the tests, inspections, and measurements performed, their results, and all other bases for the conclusion that the facility unit, unit component, and/or closure have been constructed, installed and/or performed in conformance with the design and construction specifications of this permit and in compliance with this permit. The report shall describe each activity as it relates to each facility unit or component being certified including reference to all applicable permit provisions. The report shall contain the following items, at a minimum:

- (1) Scaled, as-built plan-view and cross-sectional drawings which accurately depict the facility unit and all unit components and subcomponents and which demonstrate compliance with the design and construction specifications approved and detailed in the terms of this permit;
- (2) All necessary references to dimensions, elevations, slopes, construction materials, thickness and equipment; and
- (3) For all drawings and specifications, the date, signature, and seal of a Professional Engineer who is Licensed in the State of Texas.

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[II.A.]

- c. The Executive Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or if within 15 days of submission of the letter required by paragraph (a) of this section, the permittee has not received notice from the Executive Director of the intent to inspect, prior inspection is waived and the permittee may commence processing, storage, or disposal of solid waste.

\*7. Land Disposal Restrictions

The permittee shall comply with the land disposal restrictions as found in 40 CFR 268 and any subsequent applicable requirements promulgated through the Federal Register. Requirements include modifying/amending the permittee's waste analysis plan to include analyses to determine compliance with applicable treatment standards or prohibition levels, pursuant to 40 CFR 268.7(c) and 264.13(a).

8. Dust Suppression

Pursuant to 40 CFR 266.23(b)/30 TAC Section 335.214(b), the permittee shall not use waste, used oil, or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment.

9. Permit Reopener

This permit shall be subject to review by the Executive Director five (5) years from the date of permit issuance or reissuance and shall be modified as necessary to assure that the facility continues to comply with currently applicable requirements of the Solid Waste Disposal Act (SWDA) and the rules and regulations of the Commission. The permittee shall submit any information as may be reasonably required by the Executive Director to ascertain whether the facility continues to comply with currently applicable requirements of the SWDA and the rules and regulations of the Commission.

10. Texas Coastal Management Program (Not Applicable)

11. Monitoring of Commercial Hazardous Waste Management Facility Operations (Not Applicable)

B. Recordkeeping and Reporting Requirements

1. Monitoring and Records

- a. All data submitted to the TCEQ shall be in a manner consistent with the latest version of the "Quality Assurance Project Plan for the Texas Commission on Environmental Quality for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act and Underground Injection Control" (TCEQ QAPP).

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## [II.B.1.]

- b. [30 TAC Section 305.125(11)(A)] Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved in writing prior to use by the Executive Director of the TCEQ. Laboratory methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, 1987, as revised; *Standard Methods for the Examination of Water and Wastewater, Fifteenth Edition*, 1980, and 1981 supplement, or current adopted edition; *RCRA Ground-Water Monitoring: Draft Technical Guidance*, 1992, OSWER Directive 9950.1, or an equivalent method, as specified in the Waste Analysis Plan, Section of the Part B Application, and approved in writing prior to use by the Executive Director.
- c. [30 TAC Section 305.125(11)(B)] The permittee shall retain in an organized fashion and furnish to the Executive Director, upon request, records of all monitoring information, copies of all reports and records required by this permit, and the certification required by 40 CFR 264.73(b)(9), for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application.
- d. [30 TAC Section 305.125(11)(C)] Records of monitoring shall include the following:
- (1) The date, time, and place of sample or measurement;
  - (2) The identity of individual who collected the sample or measurement;
  - (3) The dates analyses were performed;
  - (4) The identity of individual and laboratory who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses or measurements.

2. Operating Record

In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73. These records will be made available to representatives of the TCEQ upon request.



[II.B.]

3. Retention of Application Data

[30 TAC Section 305.47] A permittee shall keep records throughout the term of the permit of data used to complete the final application and any supplemental information. All copies of renewals, amendments, revisions and modifications must be kept at a site within the region, in which the site is located and must be made available upon request of TCEQ staff. All materials, including any related information, submitted to complete the application shall be retained, not just those materials which have been incorporated into the permit.

4. Reporting of Noncompliance

The permittee shall report to the Executive Director of the TCEQ information regarding any noncompliance which may endanger human health or the environment. [30 TAC Section 305.125(9)]

- a. Report of such information shall be provided orally within 24 hours from the time the permittee becomes aware of the noncompliance.
- b. A written submission of such information shall also be provided within five days of the time the permittee becomes aware of the noncompliance. The written submission shall contain the following:
  - (1) a description of the noncompliance and its cause;
  - (2) the potential danger to human health or safety, or the environment;
  - (3) the period of noncompliance, including exact dates and times;
  - (4) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
  - (5) steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance, and to mitigate its adverse effects.

5. Twenty-Four Hour Reporting

The following shall be included as information which must be reported orally within 24 hours pursuant to Title 30 TAC Section 305.125(9): [30 TAC Section 305.145]

- a. Information concerning release of any solid waste that may cause an endangerment to public drinking water supplies;

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**[II.B.5.]**

b. Any information of a release or discharge of solid waste, or of a fire or explosion which could threaten the environment or human health or safety, outside the facility. The description of the occurrence and its cause shall include:

- (1) name, address, and telephone number of the owner or operator;
- (2) name, address, and telephone number of the facility;
- (3) date, time, and type of incident;
- (4) name and quantity of material(s) involved;
- (5) the extent of injuries, if any;
- (6) an assessment of actual or potential hazards to the environment and human health or safety outside the facility, where this is applicable; and
- (7) estimated quantity and disposition of recovered material that resulted from the incident.

6. Notice Waiver

[30 TAC Section 305.145(b)] The Executive Director may waive the five-day written notice requirement specified in Provision II.B.4.b. (Reporting of Noncompliance) in favor of a written report submitted to the Commission within 15 days of the time the permittee becomes aware of the noncompliance or condition.

7. Biennial Report

The permittee shall prepare and submit to the Executive Director all information and records required by 40 CFR 264.75. By March 1st of each even-numbered year for the preceding odd-numbered year's activities the permittee shall submit either a Biennial Report or letter certifying submission of the above. One copy of the report/letter shall be submitted to the TCEQ Industrial and Hazardous Waste Permits Section and an additional copy shall be submitted to the appropriate TCEQ Regional Office.

8. Pollution Prevention

Facilities subject to 30 TAC Chapter 335, Subchapter Q - Pollution Prevention: Source Reduction and Waste Minimization, must prepare a five year Source Reduction and Waste Minimization Plan and submit a Source Reduction and Waste Minimization Annual Report (SR/WM Annual Report) to the TCEQ Small Business and Environmental Assistance Division. This report must be submitted annually on the dates specified in the rule.

[II.B.]

9. Waste Minimization

The permittee shall annually certify, by January 25th for the previous calendar year, the following information, [40 CFR 264.73(b)(9)]:

- a. that the permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the permittee's facility operation to the degree determined to be economically practicable; and
- b. that the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment. This waste minimization certification is to be included in the facility operating records until closure.

10. Annual Detection Monitoring Report

The permittee shall submit an Annual Detection Monitoring Report as required by Provision VI.G. by March 1<sup>st</sup> of each year.

11. Manifest Discrepancy Report (Not Applicable)

C. Incorporated Regulatory Requirements

1. State Regulations

The following TCEQ regulations are hereby made provisions and conditions of this permit. Issuance of this permit with incorporated rules in no way exempts the permittee from compliance with any other applicable state statute and/or Commission Rule.

- a. 30 TAC Chapter 37, Subchapter P;
- b. 30 TAC Chapter 305, Subchapter A: General Provisions;
- c. 30 TAC Chapter 305, Subchapter C: Application for Permit;
- d. 30 TAC Sections 305.61 - 305.69 (regarding amendments, renewals, transfers, corrections, revocation and suspension of permits);
- e. 30 TAC Sections 305.121 - 305.125 (regarding permit characteristics and conditions);
- f. 30 TAC Sections 305.127 - 305.129 (regarding permit conditions, signatories and variance procedures);

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## [II.C.1.]

- g. 30 TAC Chapter 305, Subchapter G: Additional Conditions for Hazardous and Industrial Solid Waste Storage, Processing and Disposal Permits;
- h. 30 TAC Chapter 335, Subchapter A: Industrial Solid Waste and Municipal Hazardous Waste in General;
- i. 30 TAC Chapter 335, Subchapter B: Hazardous Waste Management General Provisions;
- j. 30 TAC Section 335.152: Standards;
- k. 30 TAC Sections 335.153 - 335.155 (regarding reporting of emergency situations and additional reports required); and
- l. 30 TAC Chapter 350, Texas Risk Reduction Program (TRRP).

2. Federal Regulations

To the extent applicable to the activities authorized by this permit, the following provisions of 40 CFR Part 264, adopted by reference by 30 TAC Section 335.152, are hereby made provisions and conditions of this permit, to the extent consistent with the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361 (Vernon), and the rules of the TCEQ:

- a. Subpart B -- General Facility Standards;
- b. Subpart E -- Manifest System, Recordkeeping, and Reporting;
- c. Subpart G -- Closure and Post-closure;
- d. Subpart H -- Financial Requirements;
- e. Subpart N - Landfills; and
- f. 40 CFR Part 268 Land Disposal Restrictions.

III. FACILITY MANAGEMENTA. Operation of Facility

The permittee shall construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31. All equipment and structures used to manage hazardous waste at the facility shall be maintained in proper operating condition.

[III.] B. Personnel Training

The permittee shall ensure that all facility personnel involved with hazardous waste management successfully complete a training program as required by 40 CFR 264.16. The permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

C. Security

1. The permittee shall provide and maintain an artificial or natural barrier which completely surrounds the post-closure portion(s) of the facility and shall have a means to control entry, at all times, through gates or other entrances to these same facility areas.
2. The permittee shall post warning signs at all points of access to the post-closure care portion(s) of the facility and along the natural and/or artificial barriers in sufficient numbers to be seen from any approach to that portion of the facility. The signs shall be printed so that they may be clearly read from a distance of at least 25 feet, and shall state "Danger - Unauthorized Personnel Keep Out" in English.

D. General Inspection Requirements

The permittee shall follow the inspection schedule contained in the permit application submittals identified in Provision I.B. (Incorporated Application Material) and as set out in Table III.D.-Inspection Schedule. The permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d). Any remedial actions taken in response to facility inspections and the date of the remediation shall be included in the inspection records.

E. Contingency Plan (Not Applicable)

F. Special Permit Conditions (Not Applicable)

IV. WASTES AND WASTE ANALYSIS

A. Waste Analysis Plan (Not Applicable)

B. Authorized Wastes

Wastes which have historically been managed in the post-closure care unit authorized in Provision V are listed in Table IV.B. Wastes Managed in Permitted Units.

C. Sampling and Analytical Methods

The permittee shall ensure that all waste analyses utilized for waste identification or verification have been performed in accordance with methods specified in the current editions of "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", (SW-846), ASTM or other methods accepted by the TCEQ. The permittee shall have a QA/QC program that is consistent with EPA SW 846 and the TCEQ QAPP.

V. AUTHORIZED UNITS AND OPERATIONS

A. AUTHORIZED UNITS

1. The permittee is authorized to operate the facility units listed in "Attachment D" for post-closure care subject to the limitations herein. All waste management activities not otherwise exempted from permitting under 30 Texas Administrative Code (TAC) Section 335.2 shall be confined to the authorized facility units listed in "Attachment D". References hereinafter in this permit to "TCEQ Permit Unit No. \_\_" shall be to the facility units listed in "Attachment D". All authorized units must be clearly identified as numbered in "Attachment D". These units must have signs indicating "TCEQ PERMIT UNIT NO. \_\_".
2. The permittee shall prevent inundation of any permitted units and prevent any discharges of any waste or runoff of waste contaminated stormwater from permitted units.

B. CONTAINER STORAGE AREAS (Not Applicable)

C. TANKS AND TANK SYSTEMS (Not Applicable)

D. SURFACE IMPOUNDMENTS

The permittee shall perform post-closure care of the closed surface impoundments identified in Table VII.G. The permittee is authorized to operate the permitted closed surface impoundments for post-closure care subject to the limitation contained herein.

E. WASTE PILES (Not Applicable)

F. LAND TREATMENT UNITS (Not Applicable)

G. LANDFILLS (Not Applicable)

H. INCINERATORS (Not Applicable)

I. BOILERS (Not Applicable)

J. DRIP PADS (Not Applicable)

K. MISCELLANEOUS UNITS (Not Applicable)

L. CONTAINMENT BUILDINGS (Not Applicable)

VI. GROUNDWATER DETECTION MONITORING

A. Groundwater Monitoring Program

The permittee shall design, construct and maintain a ground-water monitoring program to monitor area ground water throughout the post-closure care period. Groundwater monitoring at the facility shall at a minimum consist of a Detection Monitoring System for the Burkeville Aquiclude (a portion of the Fleming Formation) consists of clay and sandstone; mostly clay, silty, commonly calcareous, medium to coarse grained sandstone. The Detection Monitoring System shall yield groundwater samples from the uppermost aquifer that represent the quality of background water and the quality of ground water at the point of compliance.

1. Identification of Detection Monitoring Program Unit(s)/Area(s)

The Detection Monitoring Program is specific to the RCRA-regulated unit listed in Table VI.B.3.b.-Unit Groundwater Detection Monitoring System for which groundwater monitoring requirements apply pursuant to 30 TAC Section 335.164:

2. Capabilities of Detection Monitoring Systems

The Detection Monitoring System shall yield groundwater samples from the uppermost aquifer/water-bearing zone that represent the quality of background water that has not been affected by operation of the regulated unit and that represent the quality of ground water passing the point of compliance. This system shall be capable of detecting a release from the regulated unit to the ground water.

3. Point of Compliance

The point of compliance for the Detection Monitoring System is defined by a vertical plane, located along the entire periphery of each permitted unit, that extends down into the uppermost aquifer/water bearing zone underlying the regulated unit.

4. Detection Monitoring Program

The permittee is required to install and operate a Detection Monitoring System(s) subject to the limitations contained herein. The Detection Monitoring System wells for each unit/area are listed in Table VI.B.3.b - Unit Groundwater Detection Monitoring System.

- a. A Detection Monitoring System shall, at a minimum, consist of two categories of wells, Background and Point of Compliance Wells, which will be used to establish groundwater quality for each RCRA-regulated unit.

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[VI.4.a.]

(1) Background Wells are those wells that are unaffected by the operations of the unit. The Background Wells are depicted in Attachment E (permit application Detection Monitoring System Wells Map or identify the name of the map from application Section VI.B.3.e. which illustrates the Detection Monitoring System Wells) and are also listed in Table VI.B.3.b.-Unit Groundwater Detection Monitoring System.

(2) Point of Compliance (POC) Wells are used to demonstrate compliance with the Detection Monitoring Parameters which are

listed on Table VI.B.3.c.-Groundwater Detection Monitoring Parameters. POC Wells are designated in Attachment E (permit application Detection Monitoring System Wells Map or identify the name of the map from application Section VI.B.3.e. which illustrates the Detection Monitoring System Wells) and are also listed in Table VI.B.3.b.-Unit Groundwater Detection Monitoring System.

(3) The Detection Monitoring System may also include Supplemental Wells, as necessary, to establish groundwater quality and hydrogeologic conditions of the uppermost aquifer/water-bearing zone.

b. The permittee shall determine groundwater quality in the uppermost aquifer throughout the post-closure care period in accordance with the parameter list and sampling schedule specified in Provisions VI.C.2. and VI.D.2., respectively.

c. The design, construction, maintenance and operation of the authorized components of the Detection Monitoring Program must be in accordance with this permit and approved Part B Permit Application Section VI.B., which is incorporated into this permit through permit Provision I.B.

B. Construction, Certification, and Plugging

Wells shall be constructed and maintained so groundwater samples are representative of the aquifer's water quality. A record of drilling and construction details demonstrating compliance with the terms of this permit section shall be prepared in accordance with Attachment F (Well Design and Construction Specifications). Wells constructed prior to issuance of this permit may be utilized as groundwater monitoring wells if they meet the standards of Attachment F (Well Design and Construction Specifications).



[VI.B]

1. Well Construction

- a. For all groundwater monitor wells to be constructed in accordance with this permit, the permittee shall notify the Executive Director to report the proposed monitor well location and screened interval at least thirty (30) days in advance of the anticipated date of installation or in accordance with an approved schedule for installation. Alternatively, a schedule for installation issued as part of an approved work plan shall constitute such notification. New well construction shall commence upon written approval of the Executive Director within the timeframes specified in this permit.
- b. The permittee shall install the wells of the Detection Monitoring System and submit certification of this installation within sixty (60) days of installation, as described in Attachment F (Well Design and Construction Specifications). The Detection Monitoring Wells shall be installed in

accordance with the schedule outlined in Attachment F (Well Design and Construction Specifications).

2. Replacement Wells

Prior to installation of a replacement well, the permittee shall submit to the Executive Director for approval, the replacement well specifications and an explanation of why the well is being replaced. For any Detection Monitoring System well to be considered a replacement well and not a new well, the well shall have no design changes from the well being replaced; shall be drilled within fifteen (15) feet of the well being replaced; and shall be installed in accordance with this Provision and Attachment F (Well Design and Construction Specifications).

3. Well Management Activities Requiring Permit Modification

- a. If the permittee or the Executive Director determines that the well integrity, materials of construction, or well placement no longer enable a well to yield samples representative of groundwater quality from the desired aquifer(s), then the permittee shall submit a permit modification or amendment request to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, describing actions the permittee will take to remedy the situation. The permittee shall also notify the Executive Director within fifteen (15) days of such determination regarding a well.
- b. The permittee shall submit a permit modification or amendment request to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, when new POC or Background Wells are to be constructed after issuance of this permit (i.e., if the wells have not been included in the approved Part B Permit Application materials referenced in permit Provision I.B.).

[VI.]

- c. The permittee shall submit a permit modification or amendment request, for installation of a new well, to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, when any wells being replaced do not meet the requirements of Provision VI.B.2. for a replacement well.

4. Plugging and Abandonment Procedures

- a. If a Detection Monitoring Well listed in Table VI.B.3.b.-Unit Groundwater Detection Monitoring System is plugged and abandoned and a replacement well is not installed in accordance with this permit, then a modification request shall be submitted in accordance with 30 TAC Section 305.69 within 90 days of the plugging and abandonment procedure to update Table VI.B.3.b.-Unit Groundwater Detection Monitoring System of the permit.
- b. For all wells to be plugged and abandoned after issuance of this permit, the permittee shall follow the procedures specified in Attachment F (Well Design and Construction Specifications).

C. Detection Monitoring System: Operation

1. Uppermost Aquifer/Water-Bearing Zone Monitored by the Detection Monitoring System

The Detection Monitoring System shall be designed to monitor the ground water in the uppermost aquifer/water-bearing zone. The "uppermost aquifer", as referenced in this permit, refers to the Burkeville Aquiclude ( a portion of the Fleming Formation). The Fleming Formation ranges in elevation from approximately 330 feet above Mean Sea Level (MSL) to 344 feet above MSL. The top of the uppermost aquifer/water-bearing zone is approximately 16 to 34 feet below ground surface (BGS). Ground water is typically encountered 20 to 40 feet BGS.

2. Groundwater Detection Monitoring Parameters and Compliance

- a. [30 TAC Section 335.164(1)] The permittee shall monitor well numbers MH-2, MH-3, MH-5, MH-6, and MH-9. The uppermost aquifer's groundwater quality will be evaluated based on the parameters listed in Table VI.B.3.c.-Groundwater Detection Monitoring Parameters. Sampling and Analysis for the Groundwater Detection Monitoring Parameters of Table VI.B.3.c. shall be conducted in accordance with Provision II.B.1.b. of this permit.

[VLC.2.]

- b. Background groundwater quality for a monitoring parameter or constituent shall be based on a sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained. The permittee shall determine the concentrations of the detection monitoring parameters and water quality parameters listed in Table VI.B.3.c.-Groundwater Detection Monitoring Parameters for each sample collected.
- c. Compliance with the Groundwater Detection Monitoring Parameters listed in Table VI.B.3.c is defined by the results of the data evaluation of Provision VI.D.4, wherein the groundwater monitoring data for each well does not exhibit evidence of contamination over background values. If any POC Well is determined to be noncompliant with Table VI.B.3.c.-Groundwater Detection Monitoring Parameters at any time during the Detection Monitoring Program, the permittee shall respond and report according to Provision VI.E.1.

3. Post-Closure Care Period

The area listed in Provision VI.A.1. shall remain in the Detection Monitoring Program during any applicable Post-Closure Care Period. After closure activities are completed for a specified unit and certification of closure is received by the Executive Director, any applicable Post-Closure Care period shall begin. If the Post-Closure Care Period has expired and a Statistically Significant Increase (SSI) of the Groundwater Detection Monitoring Parameters of Table VI.B.3.c. has not been confirmed in the ground water, then the permittee shall notify the Executive Director in writing at least 30 days prior to discontinuing the Detection Monitoring Program for the specified unit. Within 90 days of the notification, the permittee shall submit a final report to the Commission for the specified unit. The final report shall include the information required by the annual report of Provision VI.G.

4. Waste Management of Recovered Groundwater

- a. Recovered ground water from a Detection Monitoring Well with no known contamination may be managed as uncontaminated prior to analysis. Following analysis, if the permittee determines that a Table VI.B.3.c.-Groundwater Detection Monitoring Parameter has an SSI over background value, the recovered shall be managed as contaminated water.
- b. Recovered ground water with known contamination which exceeds the Table VI.B.3.c.- Groundwater Detection Monitoring Parameters shall be managed as contaminated water.

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[VI.] D. Sampling and Analysis1. Sampling and Analysis

The permittee shall follow the methods set out in EPA's RCRA Groundwater Monitoring Draft Technical Guidance Document (November 1992) or an alternate method with prior written approval of the Executive Director to collect and preserve samples withdrawn from groundwater monitoring wells. The collected samples shall be managed (i.e., Chain of Custody and handling procedure), analyzed, and statistically evaluated (i.e., Quality Assurance/Quality Control (QA/QC)) in accordance with the current edition of U.S. EPA Publication SW-846, Test Methods for Evaluating Solid Waste and American Society for Testing and Materials (ASTM) Standard Test Methods or other equivalent methods with prior written approval of the Executive Director.

a. All groundwater analyses required by this permit shall be performed using a QA/QC program where all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. All QA/QC program details shall be put in writing and assignments made to qualified personnel. At a minimum, the program shall conform to the QA/QC program details described in the current edition of U.S. EPA Publication SW-846, Test Methods for Evaluating Solid Waste and American Society for Testing and Materials (ASTM) Standard Test Methods or other equivalent methods accepted in writing by the Executive Director.

b. Groundwater analyses required by this permit shall utilize laboratory methods which are capable of measuring concentrations equal to or less than established background values.

2. Sampling and Analysis Frequencies and Parameters

a. Frequencies of sampling shall be monthly, quarterly, semiannually or yearly, depending on the sampling objective. These periods of time are defined below:

(1) "Month" shall be a calendar month;

(2) "Quarter" shall be based on divisions of the calendar year (i.e., January through March, April through June, July through September, October through December);

(3) "Semiannual" shall be based on divisions of the calendar year (i.e., January through June, July through December) and consist of two consecutive quarters;

[VI.D.]

3. Statistical Procedures for Data Evaluation

- a. For each POC Well sampled during each sampling event, the permittee shall determine whether there is evidence of an SSI in the concentrations of each Groundwater Detection Monitoring Parameter of Table VI.B.3.c. when compared to the Background Well groundwater quality data. In determining whether or not an SSI has occurred for a Groundwater Detection Monitoring Parameter of Table VI.B.3.c., the permittee shall establish if the background values have been exceeded by utilizing the statistical procedures and data evaluation described in the following guidance:
  - (1) Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, U.S. EPA, April 1989; and
  - (2) Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Addendum to Interim Final Guidance, U.S. EPA, June 1992.
- b. The statistical procedure that shall be used to determine if an SSI has occurred over background values limits shall be the tolerance limits for the following unit identified in Provision VI.A.1.: surface impoundments closed as a landfill. To employ the selected statistical procedure listed above, the permittee is required to collect a minimum of five samples from each unit's Background and POC Wells during each sampling event.
- c. If it is determined that the selected statistical procedure is not appropriate to conduct data evaluation for a specified unit, then the permittee shall select an alternate statistical procedure. Prior to using a statistical procedure which is different than the one identified in Provision VI.D.3.b., the permittee shall obtain approval from the Executive Director through a permit amendment or modification as specified in 30 TAC Sections 305.62 and 305.69, respectively.

4. Data Evaluation

- a. Data evaluations shall be completed within sixty (60) days of the sampling date unless QA/QC procedures show that data is unacceptable and re-analysis or resampling must be performed. In such cases, the Executive Director will be notified as soon as it becomes apparent that the 60-day time limit to conduct data evaluation cannot be met.
- b. Data evaluation shall determine whether there is evidence of an SSI for Groundwater Detection Monitoring Parameters listed in Table VI.B.3.c. each time groundwater quality is determined at the POC in accordance with 30 TAC Section 335.163(7).

[VI.] E. Response Requirements for SSI

1. If the permittee has determined an SSI over background values for any of the Groundwater Monitoring Parameters identified in Table VI.B.3.c., in accordance with statistical procedures authorized by Provision VI.D.3. and specified by the permittee, the permittee shall perform the following actions:
  - a. Notify the Executive Director in writing, within seven (7) days. The notification must indicate which Groundwater Detection Monitoring Parameter(s) of Table VI.B.3.c. has exhibited an SSI.
  - b. Immediately sample the ground water in all wells of Table VI.B.3.b.-Unit Groundwater Detection Monitoring System which exhibit an SSI for the specified unit and determine whether constituents of Appendix IX of 40 CFR 264 are present, and if so, in what concentrations.
  - c. For any Appendix IX hazardous constituent found in the analysis pursuant to Provision VI.E.1.b., the permittee may resample for hazardous constituents within one month and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these detected constituents will form the basis for a Compliance Monitoring Program. If the permittee does not resample for the constituents found pursuant to Provision VI.E.1.b., the hazardous constituents found during the initial Appendix IX analysis will form the basis for the Compliance Monitoring Program.
  - d. Upon establishing that a release has occurred from a unit(s), the permittee shall submit to the Executive Director a permit amendment or modification to modify the Detection Monitoring Program and a compliance plan application to initiate a Compliance Monitoring Program and/or a Corrective Action Program for the specified unit(s). The permit and compliance plan applications must be submitted based on the following schedule:
    - (1) If ground water downgradient of the specified unit does not exceed the requirements in 30 TAC Section 335.158 for the proposed groundwater protection standard (GWPS), then within ninety (90) days, the permittee shall submit a permit amendment and a compliance plan application to establish a Compliance Monitoring Program for the specified unit;

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[V.I.E.]

- (2) If ground water downgradient of the specified unit exceeds the requirements in 30 TAC Section 335.158 for the proposed GWPS requested in the application for a specified unit, and an Alternate Concentration Limit (ACL) is not being proposed in the application in accordance with 30 TAC Section 335.160(b) to establish the GWPS, then within 180 days, the permittee shall submit a permit amendment or modification and a compliance plan application to establish a Corrective Action Program for the specified unit.
  - (3) If ground water downgradient of the specified unit exceeds the requirements in 30 TAC Section 335.158 for the proposed GWPS requested in the application for a specified unit, and an ACL is being proposed in the application in accordance with 30 TAC Section 335.160(b) to establish the GWPS, then within 180 days, the permittee shall submit a permit amendment or modification and a compliance plan application with an ACL demonstration to establish a Corrective Action Program for the specified unit.
2. If the permittee determines that there is an SSI above (or for pH, a statistically significant variation from) background values for the Groundwater Detection Monitoring Parameters specified in Table V.I.B.3.c., the permittee may demonstrate a source other than the RCRA-regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In such cases, the permittee shall perform the following actions:
- a. Notify the Executive Director in writing within seven (7) days that the permittee intends to make a demonstration.
  - b. Within ninety (90) days, submit a report to the Executive Director which demonstrates that a source other than a RCRA-regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation.
  - c. Submit to the Executive Director an application for a permit amendment or modification and a compliance plan application to make any appropriate changes to the Detection Monitoring Program at the facility. The applications shall be submitted in accordance with Provision V.I.E.1.d.
  - d. Continue to monitor ground water in accordance with the Detection Monitoring Program at the facility.

[VI.] F. Revised Detection Monitoring Program

If the permittee or the Executive Director determines that the Detection Monitoring Program no longer satisfies the requirements of 30 TAC Section 335.164, the permittee must, within ninety (90) days of either the permittee's determination or Executive Director's notification, submit a permit amendment or modification request to make any appropriate changes to the Detection Monitoring Program which will satisfy the regulations.

G. Annual Detection Monitoring Reporting Requirements

The permittee shall submit an Annual Detection Monitoring Report which shall include the following information determined since the previously submitted report:

1. A statement whether an SSI has occurred over background values in any well during the previous calendar year period and the status of any SSI events.
2. The permittee shall include the results of all monitoring, testing, and analytical work obtained or prepared pursuant to the requirements of this permit, including a summary of background groundwater quality values, groundwater monitoring analyses, statistical calculations, graphs and drawings.
3. The groundwater flow rate and direction in the uppermost aquifer. The groundwater flow rate and direction of ground water flow shall be established using the data collected during the preceding calendar year's sampling events from the monitoring wells of the Detection Monitoring Program. The permittee shall also include in the report all documentation used to determine the groundwater flow rate and direction of ground water flow.
4. A contour map of piezometric water levels in the uppermost aquifer based at a minimum upon concurrent measurement in all monitoring wells. All data or documentation used to establish the contour map should be included in the report.
5. Recommendation for any changes.
6. Any other items requested by the Executive Director.

H. Record Keeping Requirements

1. The permittee shall enter all monitoring, testing, analytical, statistical test computation data in evaluating groundwater monitoring data, and inspection data obtained or prepared pursuant to the requirements of this permit, including graphs and drawings, in the operating record.
2. The operating record shall be made available for review by the staff of the Commission upon request.



VII. CLOSURE AND POST-CLOSURE REQUIREMENTS

- A. Facility Closure (Not Applicable)
- B. Financial Assurance for Closure (Not Applicable)
- C. Storage, Processing, and Combustion Unit Closure Requirements (Not Applicable)
- D. Surface Impoundment Closure Requirements (Not Applicable)
- E. Landfill Closure and Certification Requirements (Not Applicable)
- F. Containment Buildings Closure Requirements (Not Applicable)
- G. Facility Post-Closure Care Requirements

For each hazardous waste management unit which is closed as a landfill, the permittee shall conduct post-closure care of the unit for a period of at least 30 years after certification of closure of each respective unit. The post-closure period for each closed unit is specified in Table VII.G - Post-Closure Period. Post-closure care shall be performed in accordance with the Post-Closure Plans referenced in Provision I.B., 40 CFR 264.117, and the following requirements:

1. Maintain all storm water conveyance structures in good functional condition.
2. Maintain the cover on the Permit Unit 1, as applicable, such that the cover promotes drainage, prevents ponding, minimizes surface water infiltration, and minimizes erosion of the cover. Any desiccation cracks, erosion, gulying, or other damage shall be repaired upon observance.
3. Maintain a self-sustaining vegetative cover on the capped areas by periodic seeding, fertilizing, irrigation, and/or mowing.
4. Maintain all benchmarks at the facility.
5. Maintain the facility perimeter fence, manned or locked gates, and warning signs in good function condition.
6. Ensure that all entrances to the facility have manned or locked gates.
7. Ensure that the TCEQ has access to the facility.
8. Prepare and submit the Biennial Report required by Provision II.B.7.
9. Perform all ground-water monitoring and related activities specified in Provision VI.A.1. of the permit.

VII.] 10. [Submit the Post-Response Action Care Plan required by 30 TAC 350.33(k). This report shall be submitted with the groundwater monitoring report required by Provision II.B.10.

11. General Post-Closure Requirements

Request for Permit Modification or Amendment

The permittee shall submit a written request for a permit modification or amendment to authorize a change in the approved Post-Closure Plan(s) in accordance with 40 CFR 264.118 (d)(2). The written request shall include a copy of the amended Post-Closure Plan(s) for approval by the Executive Director.

Time Frames for Modification/Amendment Request

The permittee shall submit a written request for a permit modification or amendment in accordance with the time frames in 40 CFR 264.118 (d)(3).

12. Post -Closure Notice and Certification Requirements

No later than 60 days after completion of the established post-closure period for each unit, the owner or operator shall submit to the Executive Director, by registered mail with a copy to the TCEQ Regional Office, a certification that the post-closure period for the unit was performed in accordance with the specifications of the approved Post-Closure Plan and this permit. The certification shall be signed by the permittee and a registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Executive Director upon request until the Executive Director releases the owner or operator from the financial assurance requirements for post-closure under 40 CFR 264.145 (I).

H. Financial Assurance for Post Closure

1. The permittee shall provide financial assurance for post-closure care of all existing units required by this permit in an amount not less than \$241,826 (2003 dollars) as shown on Table VII.E.2.- Permitted Unit Post Closure Cost Summary. Financial assurance shall be secured and maintained in compliance with 30 TAC Chapter 37, Subchapter P and 30 TAC 335.152.

Inflation Factor Correction

During the active life of the facility, financial assurance for post-closure care shall be corrected for inflation according to the methods described by 30 TAC §37.131 and §37.141.

2. The permittee shall submit to the Executive Director, upon request, such information as may be required to determine the adequacy of the financial assurance.

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### VIII. LIABILITY REQUIREMENTS

#### A. Nonsudden Accidental Occurrences

The permittee shall demonstrate continuous compliance with the requirements of 30 TAC Chapter 37, Subchapter P and 30 TAC § 335.152(a)(6) to maintain liability coverage for sudden and accidental occurrences of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.

#### B. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

The permittee shall comply with 30 TAC §37.71, regarding bankruptcy, whenever necessary.

### IX. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

#### A. Notification of Release From Solid Waste Management Unit

If a solid waste management unit (SWMU) or area of contamination not previously addressed in the RCRA Facility Assessment (RFA) dated April 16, 1990, or any release of hazardous waste or hazardous constituents that may have occurred from any SWMU and/or AOC, is discovered subsequent to issuance of this permit, the permittee shall notify the Executive Director in writing within fifteen (15) days of the discovery. Within forty-five (45) days of such discovery, the permittee shall submit an RFA for that unit or release which shall be based on U.S. EPA RCRA Facility Assessment Guidance, October 1986, NTIS PB 87-107769. If the RFA indicates a release or suspected release warrants further investigation, the permittee shall comply with the requirements of Provision IX.B. of this permit.

#### B. Corrective Action Obligations:

The permittee shall conduct corrective action as necessary to protect human health and the environment for all releases of hazardous waste and hazardous constituents from any SWMU. The permittee shall fulfill this obligation by conducting a Corrective Action Program which consists of a RCRA Facility Investigation (RFI) of the unit/area identified. The permittee shall conduct a RFI to determine whether hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264, Appendix IX have been released to into the environment. Upon completion of the RFI the Permittee shall submit to the TCEQ either a demonstration that no release occurred or an Affected Property Assessment Report (APAR) showing the vertical and lateral nature and extent of the release. If it is determined that hazardous waste or hazardous constituents have been or are being released into the environment, then the permittee may be required to implement those activities listed in the Response Action Plan (RAP) to protect human health and the environment. Upon completion of the RAP implementation the permittee must submit to the TCEQ, a Response Action Effectiveness Report (RAER) which details the activity that will be taken to remove, decontaminate and/or control chemicals of concern (COC) which may be present at the facility in excess of critical Protective Concentration Levels (PCLs) in the environmental media. The report shall include actions taken in response to releases to environmental media from waste a management unit(s) before, during, or after closure.

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[IX.B.] Upon Executive Director's review of the Corrective Action Program obligations, the permittee may be required to perform any or all of the following:

1. conduct investigation(s);
2. provide additional information;
3. conduct additional investigation(s);
4. investigate an additional unit(s);
5. proceed to the next task in the Corrective Action Program and/or;
6. submit an application for a new compliance plan or modification to an existing compliance plan to implement corrective measures.

Any additional requirements must be completed within the time frame(s) specified by the Executive Director.

C. Units Requiring Investigation

There are no known units requiring an RFI at this facility.

D. Variance from Investigation:

The permittee may elect to certify that no hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264, Appendix IX are or were present/managed in a unit listed in Provision XI.C. in lieu of performing the investigation required in Provisions IX.B. and E., provided that confirming data is submitted for the current and past waste(s) managed in the respective unit. The permittee shall submit such information and certification(s) on a unit-by-unit basis in the time frame required in Provision IX.E. for review and approval by the Executive Director of the TCEQ. If the not or were not present in a particular unit, the investigation required in Provisions IX.B. and E. shall be performed for the unit.

E. RCRA Facility Investigation (RFI):

Within sixty (60) days from the date of issuance of this permit the permittee shall submit a schedule for completion of the RFI(s) for the SWMU(s) or area(s) of contamination listed in Provision IX.C. to the Executive Director for approval. Also, within sixty (60) days of approval of a RFA Report which recommends further investigation of a SWMU(s) or area(s) of contamination in accordance with Provision IX.A., the permittee shall submit a schedule for completion of the RFI(s) to the Executive Director for approval. The permittee shall initiate the investigations in accordance with the approved schedule and shall address all of the items for RFI Workplans and RFI Reports contained in U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. If the permittee elects to use an alternate investigation approach, Executive Director approval of the workplan will be required prior to initiation of investigation(s). The results of the RFI must be submitted to the Executive Director for approval within the time frame established in the approved schedule. The APAR must document results of the investigation(s). The report shall be considered complete when the full nature and extent of the contamination, Quality Assurance/Quality Control procedures and Data Quality Objectives are documented to the satisfaction of the Executive Director.

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[IX.] F. Response Action Plan (RAP):

Upon approval of the activities outlined in the APAR, if it is determined that there has been a release into the environment of hazardous waste or hazardous constituents listed in 40 CFR Part 261, Appendix VIII and/or 40 CFR Part 264 Appendix IX, which appears to be a risk to human health and the environment, then within the time frame(s) specified by the Executive Director following approval of the APAR, the permittee shall submit a RAP. This plan shall evaluate the risk, identify and evaluate corrective measure alternatives and recommend appropriate corrective measure(s) to protect human health and the environment. The RAP shall address all of the applicable items in 30 TAC 350 Subchapter B and Subchapter E and the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994.

a. Response Action Completion Report (RACR)

The permittee shall submit a RAP within the time frame required by the Executive Director, not to exceed one-hundred-eighty (180) days from the date of approval of the APAR. The RAP shall address all of the items for Corrective Measures Implementation (CMI) Workplans contained in the U.S. EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994. If the RAP does not propose a permanent remedy, then a RAP shall be submitted as part of a new compliance plan application or as a modification/amendment application to an existing compliance plan. The RAP shall contain detailed final engineering design and monitoring plans and schedules necessary to implement the selected remedy. Implementation of the corrective measures shall be addressed through a new and/or a modified/amended compliance plan. Upon installation of a corrective action system based upon the approved RAP, the permittee shall submit a RACR. Approval of the RACR places the SWMU in a status of conditional No Further Action, reflecting that the remedy is in place, controls must be maintained, and effectiveness must be monitored. To report the progress of the corrective measures, the permittee shall submit the Post-Response Action Care Report (PRACR) to the TCEQ in accordance with the schedule specified in the compliance plan to show the progress of actions taken.

G. Compliance Plan (Not Applicable)

X. AIR EMISSION STANDARDS

Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Section 382.003 of the Texas Health and Code Ann. or violate Section 382.085 of the Texas Health and Safety Code Ann. If the Executive Director of the TCEQ determines that such a condition or violation occurs, the permittee shall implement additional abatement measures as necessary to control or prevent the condition or violation.

**TABLE III.D. INSPECTION SCHEDULE**

Facility Units(s) and Basic Elements	Possible Error, Malfunction, Or Deterioration	Frequency of Inspection
<b>Site Enclosure</b>		
Identification signs	Signs missing, damaged, deteriorating or illegible.	Monthly
Fence condition	Fence damaged, missing or deteriorating.	Monthly
Gates/lock condition	Gates unlocked, open, damaged, deteriorating, or missing.	Monthly
<b>Landfill Clay Cap</b>		
Surface soil integrity	Surface soil/cap desiccated/cracked; areas ponding, or potentially ponding, water; apparent soil erosion; animal burrows present.	Monthly Following significant rainfall events
Vegetation/cover	No vegetative cover in areas; vegetative growth over 12 inches in height.	Monthly
Surface water run-on/runoff	Erosion channel development on or around landfill; surface sediment deposition on landfill from upslope areas	Monthly
<b>Monitor Well Conditions</b>		
Access	Heavy plant growth obstructing access to , or growing on, wells.	Monthly
Casing conditions	Casing damaged, obstructed.	Monthly
Annular seal conditions	Annulus grout or well pad cracked or separated from well casing; potential openings from surface water entry to well	Monthly
Well caps	Caps not sealed properly, damaged, or missing	Monthly
Well locks	Locks unlocked, damaged, rusted or missing	Monthly

**TABLE IV.B. Wastes Managed in Permitted Units**

[illegible]

TABLE VLB.3.b Unit Groundwater Detection Monitoring System

For each unit/area which requires groundwater monitoring, specify the number and type of wells which will comprise the groundwater monitoring system for the unit/area. Prepare additional tables as necessary.

Waste Management Unit/Area Name <sup>1</sup> (Former Lagoons/Landfill)	MH-2	MH-3	MH-5	MH-6	MH-9
Well Number(s)					
Hydrogeologic Unit Monitored		Burkeville	Burkeville	Burkeville	Burkeville
Type (e.g., point of compliance, background, observation, etc.)	Background	Point of Compliance	Point of Compliance	Point of Compliance	Background
Up or Down Gradient	Up	Down	Down	Down	Up
Casing Diameter and Material	3-inch PVC	3-inch PVC	3-inch PVC	4-inch PVC	3-inch PVC
Screen Diameter and Material	3-inch PVC	3-inch PVC	3-inch PVC	4-inch PVC	3-inch PVC
Screen Slot Size (in.)	0.01 mil	0.01 mil	0.01 mil	0.01 mil	0.01 mil
Top of Casing Elevation (ft, MSL)	332.62	333.42	343.01	329.67	342.35
Grade or Surface Elevation (ft, MSL)	328.82	330.12	343.01	326.37	339.85
Well Depth (ft, )	29.5	28.5	37.35	30	~35
Screen Interval, From(ft) To(ft)	20 25	20 25	20 25	20 25	20 25
Facility Coordinates (e.g., lat/long or company coordinates)	Lat. 30°10'59" Lon. 96°25' 8"	Lat. 30°10'59" Lon. 96°25' 8"	Lat. 30°10'59" Lon. 96°25' 8"	Lat. 30°10'59" Lon. 96°25' 8"	Lat. 30°10'59" Lon. 96°25' 8"

<sup>1</sup>From Tables in Section V.

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TNRCC Part B Application



Permit No. 50390  
Chesley Industries, Inc. (a subsidiary of Hussman Corporation) **TABLE VI.B.3.c** Groundwater Sample Analysis

For each well or group of wells, specify the suite of parameters for which groundwater samples will be analyzed.

Well No(s) MH-2, 3, 5, 6 and 9

Parameter	Sampling Frequency	Analytical Method	Detection Limits	Concentration Limits <sup>1</sup>
Chloride	Semi-Annual	EPA 300.0	0.5 mg/L	(see footnote 2)
Sulfate (SO <sub>4</sub> )	Semi-Annual	EPA 300.0	1 mg/L	(see footnote 2)
Chromium (Cr), Total	Semi-Annual	SW-846	0.05 mg/L	(see footnote 2)
Nickel (Ni), Total	Semi-Annual	SW-846	0.05 mg/L	(see footnote 2)
Sodium (Na), Total	Semi-Annual	SW-846	1.0 mg/L	(see footnote 2)
Cyanide, Total	Semi-Annual	EPA 335.2	0.02 mg/L	(see footnote 2)
Zinc, Total	Semi-Annual	EPA 6010	0.01 mg/L	(see footnote 2)
Copper, Total	Semi-Annual	EPA 6010	0.01 mg/L	(see footnote 2)
pH	Semi-Annual	Field meter	<sup>3</sup> Range: 0 to 14 SU	<sup>4</sup> Stabilization = +/- 0.2 SU
Specific Conductance	Semi-Annual	Field meter	<sup>3</sup> Range: 0-9.99 S/m	<sup>4</sup> Stabilization = +/- 3%
Turbidity	Semi-Annual	Field meter	<sup>3</sup> Range: 0 - 800 NTU	<sup>4</sup> Stabilization = +/- 10%
Temperature	Semi-Annual	Field meter	<sup>3</sup> Range: 0 to 55°C	<sup>4</sup> Stabilization = +/- 3%

<sup>1</sup> The concentration limit is the basis for determining whether a release has occurred from the waste management unit/area.

<sup>2</sup> Concentration Limits will be calculated and submitted to the TCEQ in Annual Groundwater Monitoring Reports during the post closure monitoring period. The Limits will be calculated using the previous two years of data (4 events) for the two background wells MH-2 and MH-9 (8 data sets). An outlier analyses will be conducted on the data sets to determine if the data sets are normally distributed.

<sup>3</sup> Range and Accuracy values are for a Horiba U-22 water quality meter. The values may vary for other meters (if used).

<sup>4</sup> Stabilization values are based on the TCEQ document, "Guidelines for Low-Flow Purging and Sampling of Groundwater Monitor Wells". Any well that is bailed "dry" in the purging process will be allowed to recharge for 12 to 24 hours and at which point groundwater samples will be collected.

Revision 4 (12/31/03)

**TABLE VII.E.2. PERMITTED UNIT POST-CLOSURE COST SUMMARY**

Existing Unit Post-Closure Cost Estimate	
Unit	Cost
Surface Impoundments (closed)	\$241,826
<b>TOTAL EXISTING UNIT POST-CLOSURE COST ESTIMATE</b>	<b>\$241,826 (2003 dollars)<sup>1</sup></b>

Proposed Unit Post-Closure Cost Estimate	
Unit	Cost

<sup>1</sup>As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

**TABLE VI.LG - POST-CLOSURE PERIOD**

Unit Name	Date Certified Closed	Permitted Post Closure Period (Yrs)	Date Post Closure Ends
Surface Impoundments (closed)	August 22, 1984	30 years from the date of closure certification	August 22, 2014

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STATE OF TEXAS  
WASHINGTON COUNTY

INDUSTRIAL SOLID WASTE  
DISPOSAL SITE DEED RECORDATION

5034

KNOW ALL MEN BY THESE PRESENTS THAT:

Pursuant to the Rules of the Texas Department of Water Resources pertaining to Industrial Solid Waste Management, this document is hereby filed in the Deed Records of Washington County, Texas in compliance with the recordation requirements of said rule:

I

Old Brazos Forge, Inc. (now merged into its parent company, Chesley Industries, Inc.) has permanently deposited industrial waste on the land described herein. A copy of Notice of Registration 30897, including a description of wastes to be disposed of and a description of the waste disposal facility, is attached hereto and is made a part of this filing.

II

A CERTAIN 1.964 acre tract of land situated in the P. H. Coe Survey, A-31, Washington County, Texas. Said 1.964 acre tract of land being a portion of a called 20.000 acre tract of land conveyed from Donald M. Wilder, et ux to Old Brazos Forge, Inc. by deed dated September 1, 1977 and recorded in Volume 357, Page 488 of the Deed Records of Washington County, Texas. Said 1.964 acre tract of land being more particularly described on the attached plat and as follows:

COMMENCING at a 3/8-inch iron rod found at the intersection of the northwest right-of-way line of State Highway 36 Loop with the east fence line of the P. H. Coe Survey, A-31, for the most easterly corner of said called 20.00 acre tract of land;

THENCE: S 39°21'00" W along said northwest right-of-way line and a southeast line of said called 20.000 acre tract, 359.65 feet to a point;

THENCE: N 50°39'00" W across said called 20.000 acre tract, 312.21 feet to a 2-inch diameter steel fence corner post for the northeast corner and POINT OF BEGINNING of this tract;

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THENCE: In a southwesterly direction along a chain link fence line the following calls: (1) S 23°15'54" W, 156.40 feet to a 2-inch diameter steel post at angle point; (2) S 18°14'49" W, 20.64 feet to a 2-inch diameter steel post at angle point; (3) S 29°01'07" W, 121.48 feet to a 2-inch diameter steel post at angle point; (4) S 42°09'51" W, 27.65 feet to a 2-inch diameter steel fence corner post for the southeast corner of this tract;

THENCE: N 62°09'05" W along a chain link fence line, 270.72 feet to a 2-inch diameter steel fence corner post for the southwest corner of this tract;

THENCE: In a northeasterly direction along a chain link fence line the following calls: (1) N 10°43'53" E, 101.57 feet to a 2-inch diameter steel post for angle point; (2) N 50°25'55" E, 235.78 feet to a 2-inch diameter steel fence corner post for the northwest corner of this tract;

THENCE: S 64°53'21" E along a chain link fence line, 203.68 feet to the POINT OF BEGINNING containing 1.964 acres of land. This tract of land has no access to a public road.

Under the laws of the State of Texas, the owner and successive owners of this platted property must never disturb the integrity of the topsoil, protective enclosure, final cover, clay liner or groundwater monitoring wells located within the boundaries of this property, or platted as a "monitoring well" without the express permission of the Executive Director of the Texas Department of Water Resources or its statutory successor.

Wastes deposited hereon have been classified by the Texas Department of Water Resources as Class I-H. Class I waste is defined as "Any industrial solid waste or mixture of industrial solid wastes which because of its concentration, or physical or chemical characteristics, is toxic, corrosive, flammable, a strong sensitizer or irritant, a generator of sudden pressure by decomposition, heat, or other means, and may pose a substantial present or potential danger to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed, including hazardous industrial waste". The amount of Class I-H waste and contaminated material located at this site is estimated to be 8,300 cubic yards.

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III

The owner of the site is Chesley Industries, Inc., a Michigan corporation, successor by merger to Old Brazos Forge, Inc., a Texas Corporation, and its address is Loop 36 NW, Brenham, Texas 77833, where more specific information may be obtained from the plant manager.

EXECUTED this 9<sup>th</sup> day of August, 1984.

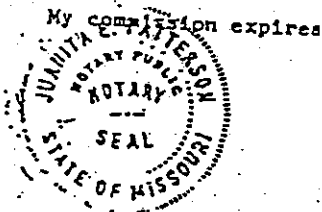
CHESLEY INDUSTRIES, INC.

By Byron A. Roche  
Vice President

STATE OF MISSOURI  
COUNTY OF ST. LOUIS

Before me, on this 9<sup>th</sup> day of August, 1984, personally appeared Byron A. Roche, Vice President of Chesley Industries, Inc., a Michigan corporation, known to me to be the person and agent of said corporation whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and capacity therein expressed.

Given under my hand and seal of office this 9<sup>th</sup> day of August, 1984.



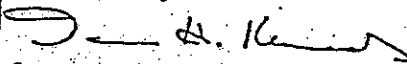
Juanita E. Patterson  
JUANITA E. PATTERSON  
NOTARY PUBLIC, STATE OF MISSOURI  
MY COMMISSION EXPIRES FEB. 2, 1985  
ST. CHARLES COUNTY

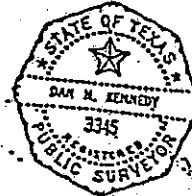
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THENCE: S 64°53'21" E along a chain link fence line, 203.68 feet to the POINT OF  
BEGINNING containing 1.964 acres of land. This tract of land has no access to a public  
road.

May 22, 1984

O'MALLEY & CLAY, INC.  
BRENNHAM, TEXAS

  
Dan H. Kennedy  
Registered Public Surveyor, #3345



**O'MALLEY AND CLAY, INC.**  
CONSULTING ENGINEERS

505 Cross Street  
Brenham, Texas 77823

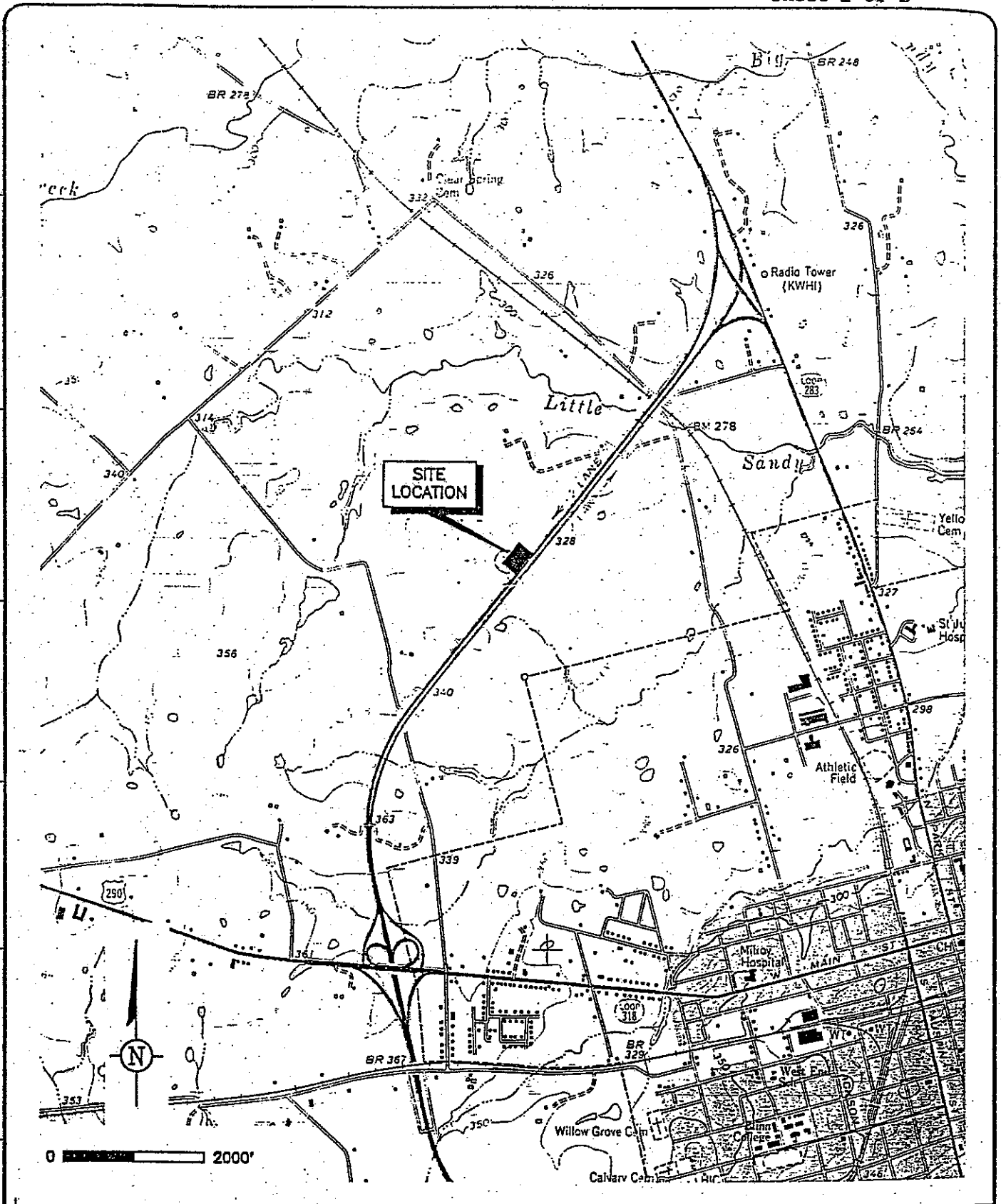
103 Parnell Street  
Bryan, Texas 77805

5526 Second Street  
Katy, Texas 77449



Drawn by	85-0029
Checked by	01/12/84
Scale	1" = 100'

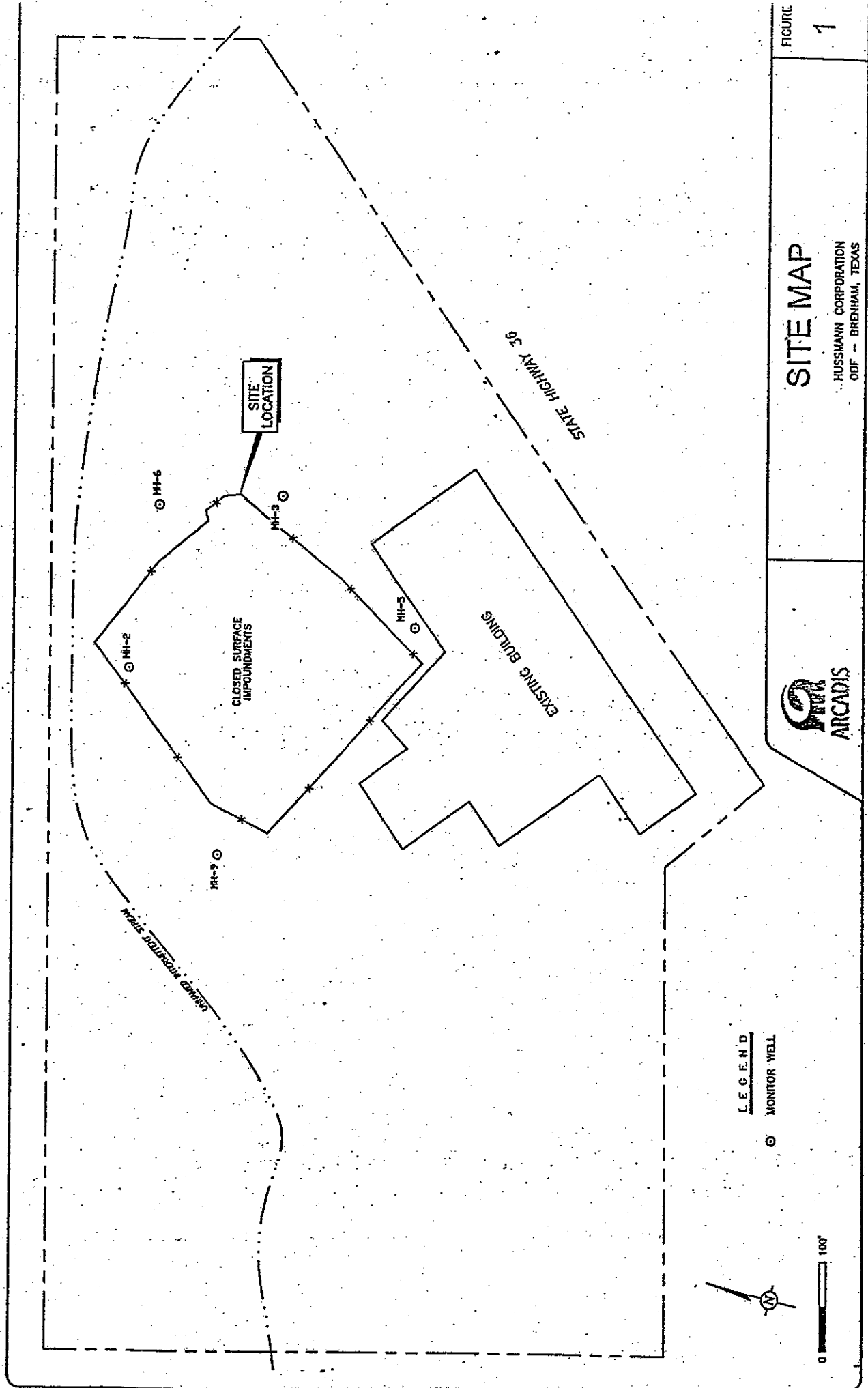
DRAFTER:  
APPROVED:  
CHECKED:  
DRAWING:  
FILE:  
PRCT NO.:  
DWG DATE:



# TOPOGRAPHIC MAP

HUSSMANN CORPORATION  
OBF — BRENHAM, TEXAS





## LIST OF INCORPORATED APPLICATION MATERIALS

The following is a list of Part A and Part B Industrial and Hazardous Waste Application elements which are incorporated into all Industrial and Hazardous Waste permits by reference as per Provision I.B.

### TNRCC PART A Application Form

#### I. General Information

- I.B. - Authorized Agents
- I.C. - Identify entity who will conduct facility operation.
- I.D. - Facility Ownership

#### III. Wastes and Waste Management

- III.C.1. - Location of Waste Management Units - Topographic Map extending one mile beyond facility.

### TNRCC PART B Application Form

#### I. General Information

- I.A. - Applicant
- I.C. - Facility Location - Address
- I.F. - Wastewater and Stormwater Disposition

#### II. Facility Siting Criteria

- II.A.2. Facility Siting Criteria - Critical habitat - Design information showing prevention of adverse impacts on critical habitat.
- II.A.3 - Sole-source aquifer - Design information showing secondary containment to preclude migration of contaminants to groundwater.
- II.A.4. - Regional Aquifer - Design information showing compliance with siting standards.
- II.A.5. - Gravel or sandy soils within 5 feet of containment structure - Design information to show compliance with siting standards.
- II.A.6. - Within one mile of lake - Design information to show compliance with siting standards.
- II.A.7. - Active geologic process - Design information to show prevention of adverse impacts.
- II.A.8. - Faulting - Design information for prevention of adverse effects.
- II.F.3.a & b. - Flooding - Design information showing flood controls.
- II.F.4.- Flooding - Actions in lieu of flood protection.

#### III. Facility Management

- III.B. - Personnel Training Plan
- III.C. - Security
- III.D. - Inspection Schedule

IV. Wastes and Waste Analysis

A. Authorized Wastes

V. Engineering Reports

V.A.1. - General Information

VI. Geology Report

VI.B.3. - Description of Current & Proposed Detection Monitoring System

VI.B.3.a. - Complete Table VI.B.3.a. - Unit Ground-Water Monitoring System

VI.B.3.b. - Complete Table VI.B.3.b. - Ground-Water Sample Analysis

VI.B.3.c. - Proposed Detection Monitoring System

VI.B.3.e. - Maps Showing:

- 1) Monitor well locations
- 2) Soil-pore sampling points (Not Applicable)
- 3) Waste Management Area
- 4) Property Boundary
- 5) Point of Compliance
- 6) Direction of Ground-Water Flow
- 7) Extent of any known plume of contamination

VI.B.3.f. - Proposed list of waste specific indicator parameters (Approved list should be included in permit)

VI.B.3.g. - Describe proposed ground water-monitoring system

VI.B.3.h. - Background Values

VI.B.3.i. - Statistical Comparison Procedures to evaluate ground-water monitoring data

VI.B.3.j. - Specify statistical method and process for determining whether constituent concentrations exceed background.

VI.D. - Unsaturated Zone Monitoring (Not Applicable)

VI.D.1. - Hazardous Constituents to be monitored

VI.D.2. - Number of soil-pore liquid sampling points (Not Applicable)

VI.D.3. - Number of soil-core sampling points (Not Applicable)

VII. Closure and Post-Closure Care Plans

VII.C.1. - Post-Closure Care Plan

VII.C.2. - Facility contact during Post-Closure Period

VII.E. - Table VII.E. Post Closure Cost Estimate

VIII. Financial Assurance

VIII.A.3. - Liability Requirements

VIII.B.1. - Applicant Financial Disclosure Statements

IX. Releases from Solid Waste Units & Corrective Action

X. Air Emission Standards

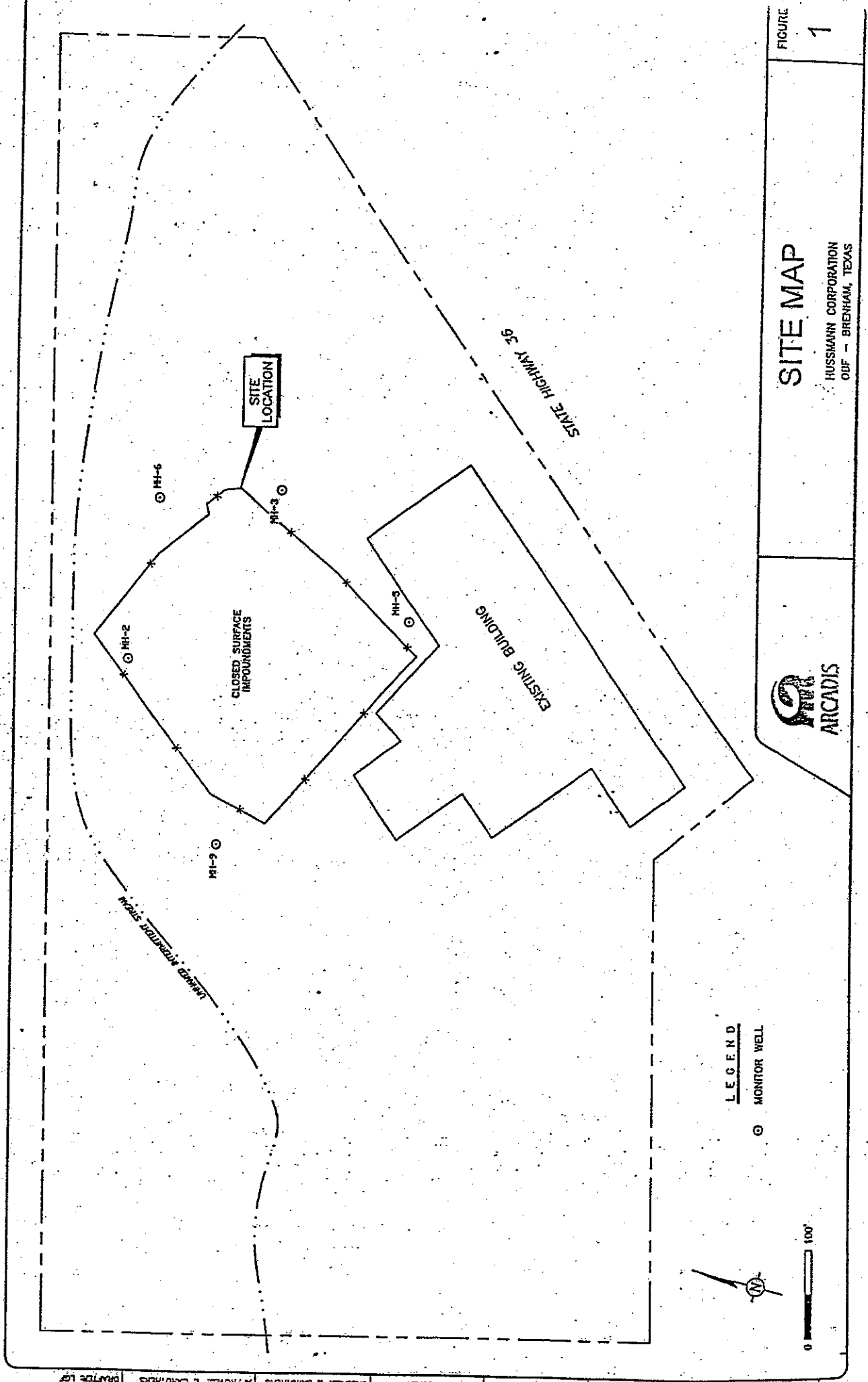
XII. Confidential Materials (Not Applicable)

Authorized Facility Units

TNRCC Permit Unit No.	Unit Name	Unit Description	Capacity
1	Surface Impoundments (closed)	Closed as a landfill	55,750 cubic feet



HUSSMANN CORPORATION  
OBF - BRENHAM, TEXAS



## LIST OF INCORPORATED APPLICATION MATERIALS

The following is a list of Part A and Part B Industrial and Hazardous Waste Application elements which are incorporated into all Industrial and Hazardous Waste permits by reference as per Provision I.B.

### TNRCC PART A Application Form

#### I. General Information

- I.B. - Authorized Agents
- I.C. - Identify entity who will conduct facility operation.
- I.D. - Facility Ownership

#### III. Wastes and Waste Management

- III.C.1. - Location of Waste Management Units - Topographic Map extending one mile beyond facility.

### TNRCC PART B Application Form

#### I. General Information

- I.A. - Applicant
- I.C. - Facility Location - Address
- I.F. - Wastewater and Stormwater Disposition

#### II. Facility Siting Criteria

- II.A.2. Facility Siting Criteria - Critical habitat - Design information showing prevention of adverse impacts on critical habitat.
- II.A.3 - Sole-source aquifer - Design information showing secondary containment to preclude migration of contaminants to groundwater.
- II.A.4. - Regional Aquifer - Design information showing compliance with siting standards.
- II.A.5. - Gravel or sandy soils within 5 feet of containment structure - Design information to show compliance with siting standards.
- II.A.6. - Within one mile of lake - Design information to show compliance with siting standards.
- II.A.7. - Active geologic process - Design information to show prevention of adverse impacts.
- II.A.8. - Faulting - Design information for prevention of adverse effects.
- II.F.3.a & b. - Flooding - Design information showing flood controls.
- II.F.4. - Flooding - Actions in lieu of flood protection.

#### III. Facility Management

- III.B. - Personnel Training Plan
- III.C. - Security
- III.D. - Inspection Schedule

IV. Wastes and Waste Analysis

A. Authorized Wastes

V. Engineering Reports

V.A.1. - General Information

VI. Geology Report

VI.B.3. - Description of Current & Proposed Detection Monitoring System

VI.B.3.a. - Complete Table VI.B.3.a. - Unit Ground-Water Monitoring System

VI.B.3.b. - Complete Table VI.B.3.b. - Ground-Water Sample Analysis

VI.B.3.c. - Proposed Detection Monitoring System

VI.B.3.e. - Maps Showing:

- 1) Monitor well locations
- 2) Soil-pore sampling points (Not Applicable)
- 3) Waste Management Area
- 4) Property Boundary
- 5) Point of Compliance
- 6) Direction of Ground-Water Flow
- 7) Extent of any known plume of contamination

VI.B.3.f. - Proposed list of waste specific indicator parameters (Approved list should be included in permit)

VI.B.3.g. - Describe proposed ground water-monitoring system

VI.B.3.h. - Background Values

VI.B.3.i. - Statistical Comparison Procedures to evaluate ground-water monitoring data

VI.B.3.j. - Specify statistical method and process for determining whether constituent concentrations exceed background.

VI.D. - Unsaturated Zone Monitoring (Not Applicable)

VI.D.1. - Hazardous Constituents to be monitored

VI.D.2. - Number of soil-pore liquid sampling points (Not Applicable)

VI.D.3. - Number of soil-core sampling points (Not Applicable)

VII. Closure and Post-Closure Care Plans

VII.C.1. - Post-Closure Care Plan

VII.C.2. - Facility contact during Post-Closure Period

VII.E. - Table VII.E. Post Closure Cost Estimate

VIII. Financial Assurance

VIII.A.3. - Liability Requirements

VIII.B.1. - Applicant Financial Disclosure Statements

IX. Releases from Solid Waste Units & Corrective Action

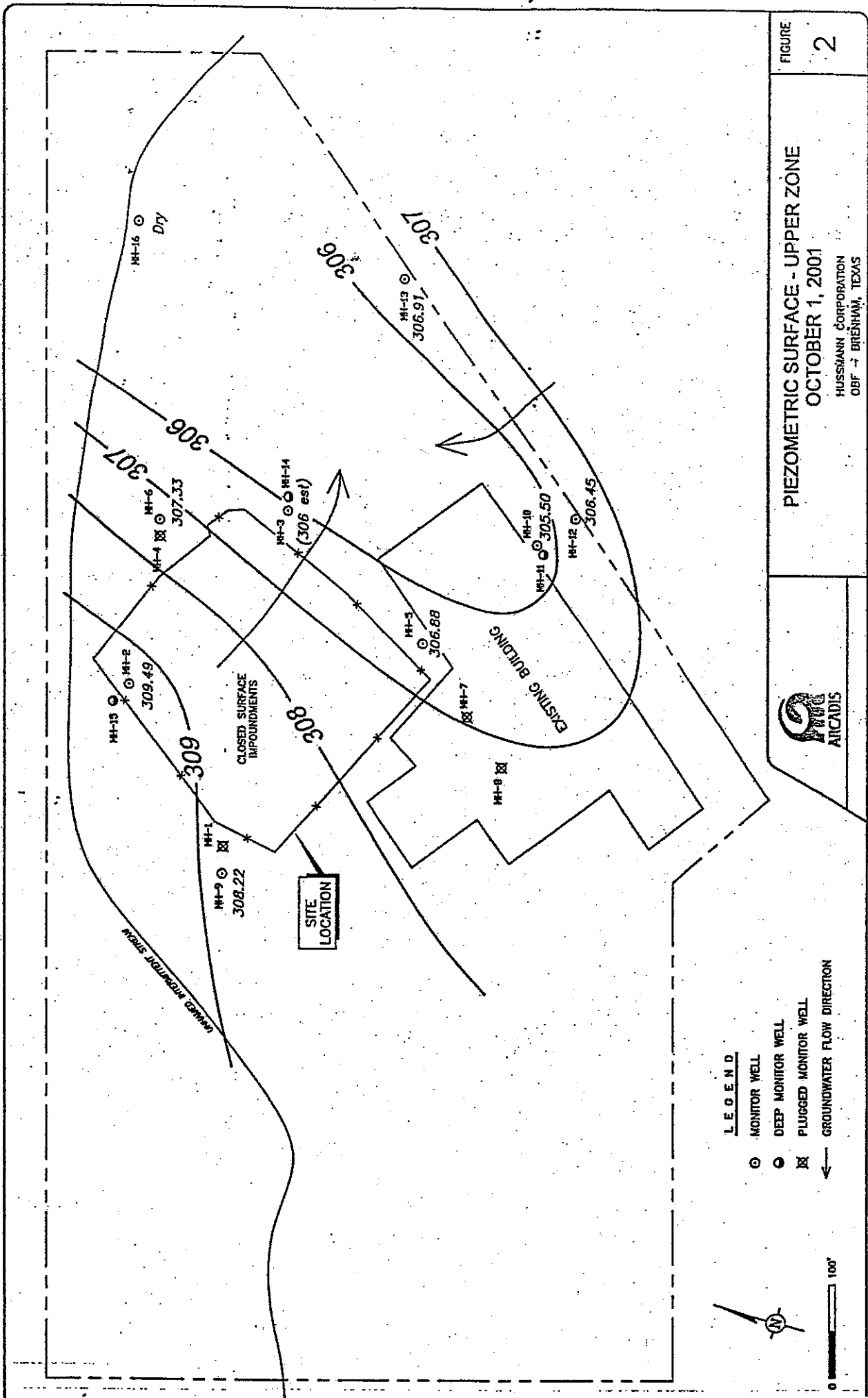
X. Air Emission Standards

XII. Confidential Materials (Not Applicable)



Authorized Facility Units

TNRCC Permit Unit No.	Unit Name	Unit Description	Capacity
1	Surface Impoundments (closed)	Closed as a landfill	55,750 cubic feet



**Attachment F - Well Design and Construction Specifications**

1. The Permittee shall use well drilling methods that minimize potential adverse effects on the quality of water samples withdrawn from the well, and that minimize or eliminate the introduction of foreign fluids into the borehole.
2. All wells constructed to meet the terms of this Permit shall be constructed such that the wells can be routinely sampled with a pump, bailer, or alternate sampling device. Piping associated with recovery wells should be fitted with sample ports or an acceptable alternative sampling method to facilitate sampling of the recovered ground water on a well by well basis.
3. Above the saturated zone the well casing may be two (2)-inch diameter or larger schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon") or an approved alternate material. The PVC casing must bear the National Sanitation Foundation logo for potable water applications (NSF-pw). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush-threaded. In and below the saturated zone, the well casing shall be stainless steel or PTFE.

The Permittee may use PVC or fiberglass reinforced resin as an alternate well casing material below the saturated zone provided that it yields samples for ground-water quality analysis that are unaffected by the well casing material.

4. The Permittee shall replace any well that has deteriorated due to incompatibility of the casing material with the ground-water contaminants or due to any other factors. Replacement of the damaged well shall be completed within ninety (90) days of the date of the inspection that identified the deterioration.
5. Well casings and screens shall be steam cleaned prior to installation to remove all oils, greases, and waxes. Well casings and screens made of fluorocarbon resins shall be cleaned by detergent washing.
6. For wells constructed after the date of issuance of this Permit, the screen length shall not exceed ten (10) feet within a given transmissive zone unless otherwise approved by the Executive Director. Screen lengths exceeding ten (10) feet may be installed in ground-water recovery or injection wells to optimize the ground-water remediation process in accordance with standard engineering practice.
7. The Permittee shall design and construct the intake portion of a well so as to allow sufficient water flow into the well for sampling purposes and to minimize the passage of formation materials into the well during pumping. The intake portion of a well shall consist of commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) that has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than three (3) feet above the well screen. A silt trap, no greater than one (1) foot in length, may be added to the bottom of the well screen to collect any silt that may enter the well. The bottom of the well casing shall be capped with PTFE or stainless steel or approved alternate material.

Ground-water recovery and injection wells shall be designed in accordance with standard engineering practice to ensure adequate well production and to accommodate ancillary equipment. Silt traps exceeding one (1) foot may be utilized to accommodate ancillary equipment. Well heads shall be fitted with mechanical wellseals, or equivalent, to prevent entry of surface water or debris.

8. A minimum of two (2) feet of pellet or granular bentonite shall immediately overlie the filter pack in the annular space between the well casing and borehole. Where the saturated zone extends above the filter pack, pellet or granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time prior to placement of grout in the annular space. Above the minimum two (2)-foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture. The grout shall be placed in the annular space by means of a tremie pipe or pressure grouting methods equivalent to tremie grouting standards.

The cement/bentonite grout mixture or TCEQ approved alternative grout mixture shall fill the annular space to within two (2) feet of the surface. A suitable amount of time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface that extends at least two (2) feet from the outer edge of the monitor well borehole for above-ground completions. Alternative annular-space seal material may be proposed with justification and must be approved by the Executive Director prior to installation.

In cases where flush-to-ground completions are unavoidable, a protective structure such as a utility vault or meter box should be installed around the well casing and the concrete pad design should prevent infiltration of water into the vault. In addition, the Permittee must ensure that 1) the well/cap juncture is watertight; 2) the bond between the cement surface seal and the protective structure is watertight; and 3) the protective structure with a steel lid or manhole cover has a rubber seal or gasket.

9. Water added as a drilling fluid to a well shall contain no bacteriological or chemical constituents that could interfere with the formation or with the chemical constituents being monitored. For ground-water recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.
10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate-free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low-yielding water-bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

For recovery and injection wells, well development methods may be utilized in accordance with standard engineering practice to remove fines and maximize well efficiency and specific capacity. Addition of freshwater and treatment agents may be utilized during well development or re-development to remove drilling fluids, inorganic scale or bacterial slime. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and ground water.
12. The Permittee shall protect the above-ground portion of the well by bumper guards and/or metal outer casing protection.
13. Copies of drilling and construction details demonstrating compliance with the items of this provision shall be kept on site. This record shall include the following information:
  - . name/number of well (well designation);
  - . intended use of the well (sampling, recovery, etc.);
  - . date/time of construction;
  - . drilling method and drilling fluid used;
  - . well location ( $\pm 0.5$  ft.);
  - . bore hole diameter and well casing diameter;
  - . well depth ( $\pm 0.1$  ft.);
  - . drilling and lithologic logs;
  - . depth to first saturated zone;
  - . casing materials;
  - . screen materials and design;
  - . casing and screen joint type;
  - . screen slot size/length;
  - . filter pack material/size;
  - . filter pack volume (how many bags, buckets, etc.);
  - . filter pack placement method;
  - . sealant materials;
  - . sealant volume (how many bags, buckets, etc.);
  - . sealant placement method;
  - . surface seal design/construction;
  - . well development procedure;
  - . type of protective well cap;
  - . ground surface elevation ( $\pm 0.01$  ft. MSL);
  - . top of casing elevation ( $\pm 0.01$  ft. MSL); and,
  - . detailed drawing of well (include dimensions).

14. The Permittee shall complete construction or abandonment and plugging of each well in accordance with the requirements of this Permit and 16 TAC 76.1000 through 76.1009 and shall certify such proper construction or abandonment within sixty (60) days of installation or abandonment. If the Permittee installs any additional or replacement wells, well completion logs for each well shall be submitted within sixty (60) days of well completion and development in accordance with 16 TAC Chapter 76. Certification of each well shall be submitted within sixty (60) days of installation for an individual well project or within sixty (60) days from the date of completion of a multiple well installation project. The certification shall be prepared by a qualified geologist or geotechnical engineer. Each well certification shall be accompanied by a certification report, including an accurate log of the soil boring, which thoroughly describes and depicts the location, elevations, material specifications, construction details, and soil conditions encountered in the boring for the well. A copy of the certification and certification report shall be kept on-site, and a second copy shall be submitted to the Executive Director. Required certification shall be in the following form:  
  
"This is to certify that installation (or abandonment and plugging) of the following facility components authorized or required by TCEQ Permit No. 50390 has been completed, and that construction (or plugging) of said components has been performed in accordance with and in compliance with the design and construction specifications of Permit No. 50390:" (Description of facility components with reference to applicable permit provisions).
15. The Permittee shall clearly mark and maintain the well number on each well at the site.
16. The Permittee shall measure and keep a record of the elevation of the top of each well casing in feet above mean sea level to the nearest 0.01 foot and permanently mark the measuring point on the well. The Permittee shall compare old and new elevations from previously surveyed wells and determine a frequency of surveying not to exceed five (5) year intervals.
17. Wells may be replaced at any time the Permittee or Executive Director determines that the well integrity or materials of construction or well placement no longer enable the well to yield samples representative of ground-water quality.
18. The Permittee shall plug soil test borings and wells removed from service after issuance of the Compliance Plan with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 14 of this attachment to this permit. The plugging of wells shall be in accordance with 16 TAC § 76.1000 through § 76.1009 dealing with Well Drilling, Completion, Capping and Plugging.
19. A well's screened interval shall be appropriately designed and installed to meet the well's specific objective (i.e., either DNAPL, LNAPL, both, or other objective of the well). All wells designed to detect, monitor, or recover DNAPL must be drilled to intercept the bottom confining layer of the aquifer. The screened interval to detect DNAPL should extend from the top of the lower confining layer to above the portion of the aquifer saturated with DNAPL. The screened interval for all wells designed to detect, monitor, or recover LNAPL must extend high enough into the vadose zone to provide for fluctuations in the seasonal water table. In addition, the sandpacks for the recovery or monitoring well's screened interval shall be coarser than surrounding media to ensure the movement of NAPL to the well.